

**SYSTEM AND METHOD FOR LASER X-RAY
GENERATION**

ABSTRACT

[0047] A technique is provided for using a laser based X-ray source for imaging systems such as computed tomography (CT) system. The laser based X-ray source may be provided as an X-ray bulb that emits X-rays when exposed to a laser beam. The X-ray bulb includes a bulb envelope and a bulb coating disposed on a portion of the bulb envelope, such that it acts as a focusing surface. The X-ray bulb also includes a target rotating about an axis such that a varying portion of the target passes through the focal point of the focusing surface. An X-ray producing plasma is generated when the laser beam is focused on the rotating target via the bulb coating.